

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An isolated polypeptide comprising a sequence selected from one of:
 - (a) SEQ ID NOS:1-23; or
 - (b) SEQ ID NOS:26-31;
 - ~~(c) SEQ ID NOS:1-23 having one or more conservative amino acid substitutions; or~~
 - ~~(d) SEQ ID NOS:26-31 having one or more conservative amino acid substitutions.~~
2. (Cancelled).
3. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:1 or SEQ ID NO:9.
4. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:2 or SEQ ID NO:10.
5. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:3 or SEQ ID NO:7.
6. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:8.
7. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:4 or SEQ ID NO:13.

8. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:5 or SEQ ID NO:17.

9. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:6 or SEQ ID NO:18.

10. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:12 or SEQ ID NO:21.

11. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:11 or SEQ ID NO:15.

12. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:14 or SEQ ID NO:16.

13. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:19 or SEQ ID NO:20.

14. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:22 or SEQ ID NO:23.

15. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:26 or SEQ ID NO:27.

16. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:28 or SEQ ID NO:29.

17. (Original) The isolated polypeptide of claim 1 wherein the sequence is selected from SEQ ID NO:30 or SEQ ID NO:31.

18. (Currently Amended) The isolated polypeptide of claim 2 1 wherein the polypeptide comprises part of a carrier protein.

19. (Currently Amended) The isolated polypeptide of claim 21 further comprising an accessory molecule.

20. (Currently Amended) The isolated polypeptide of claim 19 wherein the accessory molecule is a tag molecule, ~~identification molecule~~, chemotherapeutic agent, radiopharmaceutical, cytotoxic agent, treatment molecule, antigenic molecule, antibody fragment or antibody.

21. (Currently Amended) The isolated polypeptide of claim 1 wherein the polypeptide consists essentially of a sequence selected from (A), or (B), ~~(C) or (D)~~.

22. (Withdrawn) A method for binding a peptide to a cell, comprising: contacting a polypeptide comprising a sequence selected from one of:

(a) SEQ ID NOS:1-23; or

(b) SEQ ID NOS:26-31;

~~(d) SEQ ID NOS:1-23 having one or more conservative amino acid substitutions; or~~

~~(d) SEQ ID NOS:26-31 having one or more conservative amino acid substitutions;~~

with one or more cells for a period of time sufficient to produce one or more polypeptide-bound cells.

23. (Cancelled).

24. (Withdrawn) The method of claim 22 further comprising separating any polypeptide-bound cells.

25. (Withdrawn) The method of claim 22 wherein the one or more cells are leukemia cells.

26. (Withdrawn) The method of claim ~~23~~ 22 wherein the polypeptide is attached to a solid support or a viral envelope.

27. (Withdrawn) The method of claim ~~23~~ 22 further comprising measuring the number of polypeptide-bound cells.

28. (Withdrawn) The method of claim 22 wherein the polypeptide comprises part of a carrier protein.

29. (Withdrawn) The method of claim 22 wherein the polypeptide comprises an accessory molecule.

30. (Withdrawn) The method of claim 22 wherein the accessory molecule is a tag molecule, ~~detection molecule~~, chemotherapeutic agent, radiopharmaceutical, cytotoxic agent, treatment molecule, antigenic molecule, antibody fragment or antibody.

31. (Withdrawn) The method of claim 22 wherein the polypeptide consists essentially of a sequence selected from one of (a), or (b), ~~(c)~~ ~~or~~ (d).

32. (Cancelled).

33. (Currently Amended) ~~The A kit of claim 32 further~~ comprising one or more polypeptides comprising a sequence selected from one of:

(a) SEQ ID NOS:1-23; or

(b) SEQ ID NOS:26-31;

~~(c) SEQ ID NOS:1-23 having one or more conservative amino acid substitutions; or~~

~~(d) SEQ ID NOS:26-31 having one or more conservative amino acid substitutions.~~

34. (Withdrawn) A method of inducing an acute myelogenous leukemia cell differentiation into a mature hematopoietic cell comprising:

(a) contacting an acute myelogenous leukemia cell with a peptide that preferentially binds to the acute myelogenous leukemia cell to produce a peptide-bound acute myelogenous leukemia cell; and

(b) inducing differentiation of the peptide-bound acute myelogenous leukemia cell into a mature blood cell that performs normal blood cell function.

35. (Withdrawn) The method of claim 34 wherein the peptide induces differentiation of the peptide-bound acute myelogenous leukemia cell into the mature blood cell.

36. (Withdrawn) The method of claim 34 wherein the peptide is bound to a treatment molecule which induces differentiation of the peptide-bound acute myelogenous leukemia cell into the mature blood cell.

37. (Withdrawn) The method of claim 34 wherein steps (a) and (b) are performed *in vivo*.

38. (Withdrawn) The method of claim 37 further comprising contacting one or more additional acute myelogenous leukemia cells with a chemotherapeutic agent.

39. (Currently Amended) An isolated peptide comprising a binding region which binds preferentially to a surface of a cancerous blood cell and does not bind to the surface of a non-cancerous blood cell or binds preferentially to a surface of a non-cancerous blood cell and does not bind to the surface of a cancerous blood cell with the proviso that the peptide does not bind to an ~~immunogenic molecule~~ tumor-specific antigen.

40. (Original) The isolated peptide of claim 39 wherein the blood cell is a leukemia cell.

41. (Original) The isolated polypeptide of claim 39 wherein the polypeptide comprises part of a carrier protein.

42. (Original) The isolated polypeptide of claim 39 further comprising an accessory molecule.

43. (Currently Amended) The isolated polypeptide of claim ~~39~~ 42 wherein the accessory molecule is a tag molecule, ~~identification molecule~~, chemotherapeutic agent, radiopharmaceutical, cytotoxic agent, treatment molecule, antigenic molecule, antibody fragment or antibody.

44. (Original) The isolated polypeptide of claim 40 wherein the polypeptide induces differentiation of the leukemia cell into a mature blood cell capable of normal blood cell function.

45. (Original) The isolated polypeptide of claim 40 wherein the polypeptide inhibits proliferation of the leukemia cell.

46. (Withdrawn) A method for specifically binding a peptide with a cellular component comprising contacting a portion of a cell membrane of a hematopoietic cell with a peptide that preferentially binds to a component of the cell membrane of the hematopoietic cell for a sufficient period of time to allow the peptide to bind to the component of the cell membrane, wherein the component of the cell membrane that is preferentially bound by the peptide is weakly immunogenic or not immunogenic.

47. (Withdrawn) The method of claim 46 further comprising separating the portion of the hematopoietic cell membrane bound to the peptide.

48. (Withdrawn) The method of claim 46 wherein the peptide is bound to an accessory molecule or a solid support.

49. (Withdrawn) The method of claim 48 wherein the accessory molecule is a tag molecule, ~~identification molecule~~, chemotherapeutic agent, radiopharmaceutical, cytotoxic agent, treatment molecule, antigenic molecule, antibody fragment or antibody.

50. (Withdrawn) The method of claim 47 wherein the hematopoietic cell is a leukemia or a preleukemia cell.

51. (Withdrawn) The method of claim 47 further comprising identifying the portion of the hematopoietic cell membrane bound to the peptide.

52. (New) An isolated polypeptide comprising a sequence selected from one of:

(a) SEQ ID NOS: 1-23 having one or more conservative amino acid substitutions; or

(b) SEQ ID NOS: 26-31 having one or more conservative amino acid substitutions,

wherein the one or more conservative amino acid substitutions do not decrease the biological activity of the isolated polypeptide as compared to a non-conservative amino acid substituted polypeptide from which a substituted polypeptide derives.

53. (New) The isolated polypeptide of claim 52 wherein the polypeptide consists essentially of a sequence selected from (a) or (b).

54. (New) A method for binding a peptide to a cell, comprising: contacting a polypeptide comprising a sequence selected from claim 52 with one or more cells for a period of time sufficient to produce one or more polypeptide-bound cells.